



United States Environmental Protection Agency
Washington, D.C. 20460

Water Compliance Inspection Report

Section A: National Data System Coding (i.e. PCS)

Transaction Code 1 N 2 5 3 DC0000094 11 12 09/06/03 17 18 C 19 J 20 2
Remarks 21 _____ 66
Inspection Work Days 67 _____ 69 Facility Self-Monitoring Evaluation Rating B1 QA _____ Reserved _____
70 4 71 N 72 N 73 _____ 74 _____ 75 _____ 80

Section B: Facility Data

Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number)

Potomac Electric Power Co.
Benning Generating Station
3400 Benning Road, NE
Washington, DC 20019

Entry Time/Date

9:30 AM June 3, 2009

Permit Effective Date

11/17/2000

Exit Time/Date

5:00 PM, June 3, 2009

Permit Expiration Date

11/17/2005

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)

1. Ms. Fariba Mahvi, Lead Environmental Engineer (PEPCO), 202-331-6641
2. Mr. Ghirmay Berhe, Environmental Engineer (PHI), 202-331-6735
3. Mr. Mike Barce, Operations Manager (NAES), 202-388-2529
4. Mr. Roger Williamson, ESH Manager (PEPCO), 703-253-1782
5. Ms. Heather MacDonald, EHS Manager (NAES), 202-388-2534
5. Mr. Joe Camerini, Plant Manager (NAES), 202-388-2513

Other Facility Data (e.g., ISC NAICS, and other descriptive information)

Name, Address of Responsible Official/Title/Phone and Fax Number

Stephen Wisniewski, Vice President Operations
701 Ninth Street, NE, Washington, DC 20068

Contacted

____ Yes ____ X ____ No

Section C: Areas Evaluated During Inspection (Check only those areas evaluated)

<input checked="" type="checkbox"/> Permit	<input checked="" type="checkbox"/> Self-Monitoring Program	Pretreatment	MS4
<input checked="" type="checkbox"/> Records/Reports	<input checked="" type="checkbox"/> Compliance Schedules	Pollution Prevention	
<input checked="" type="checkbox"/> Facility Site Review	<input checked="" type="checkbox"/> Laboratory	<input checked="" type="checkbox"/> Storm Water	
<input checked="" type="checkbox"/> Effluent/Receiving Waters	<input checked="" type="checkbox"/> Operations & Maintenance	Combined Sewer Overflow	
<input checked="" type="checkbox"/> Flow Measurement	<input checked="" type="checkbox"/> Sludge Handling/Disposal	Sanitary Sewer Overflow	

Section D: Summary of Findings/Comments

(Attach additional sheets of narrative and checklists, including Single Event Violation codes, as necessary)

SEV Codes

SEV Description

Name(s) and Signature(s) of Inspector(s)

Adion Chinkuyu

Agency/Office/Phone and Fax Numbers

District Department of the Environment /Water Quality
Division/202-535-2193

Date

June 3, 2009

Charles Hufnagel

EPA - Office of Enforcement, Compliance and
Environmental Justice (OECEJ), Fort Meade/ 410-305-2775

June 3, 2009

Signature of Management Q A Reviewer

Agency/Office/Phone and Fax Numbers

Date

Comments

		PERMIT NO. <u>DC0000094</u>
SECTIONS F THRU L: COMPLETE ON ALL INSPECTIONS, AS APPROPRIATE. N/A = NOT APPLICABLE		
SECTION F - FACILITY AND PERMIT BACKGROUND		
ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY (Including City, County and ZIP code)	DATE OF LAST PREVIOUS INVESTIGATION BY EPA/STATE September 11, 2008 EPA & DDOE	
Same	FINDINGS Permit was not current; Oil & grease were not sampled properly; pH and chlorine samples were not analyzed within 15 minutes; sample temperatures were not documented on chain of custody forms; NAES monthly stormwater inspection reports were not similar to PEPCO's.	
SECTION G - RECORDS AND REPORTS		
RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. <u> X </u> YES <u> </u> NO <u> </u> N/A (Further explanation attached <u> X </u>)		
DETAILS:		
(a) ADEQUATE RECORDS MAINTAINED OF:		
(i) SAMPLING DATE, TIME, EXACT LOCATION	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(ii) ANALYSES DATES, TIMES	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(iii) INDIVIDUAL PERFORMING ANALYSIS	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(iv) ANALYTICAL METHODS/TECHNIQUES USED	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(v) ANALYTICAL RESULTS (e.g., consistent with self-monitoring report data)	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(b) MONITORING RECORDS (e.g., flow, pH, D.O., etc.) MAINTAINED FOR A MINIMUM OF THREE YEARS INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS (e.g., continuous monitoring instrumentation, calibration and maintenance records).	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(c) LAB EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS KEPT.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(d) FACILITY OPERATING RECORDS KEPT INCLUDING LOGS FOR EACH TREATMENT UNIT.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(e) QUALITY ASSURANCE RECORDS KEPT.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUSTRIES (and their compliance status) USING PUBLICLY OWNED TREATMENT WORKS.	<u> </u> YES <u> </u> NO	<u> X </u> N/A
SECTION H - PERMIT VERIFICATION		
INSPECTION OBSERVATIONS VERIFY THE PERMIT. <u> X </u> YES <u> </u> NO <u> </u> N/A (Further explanation attached <u> X </u>)		
DETAILS:		
(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(b) FACILITY IS AS DESCRIBED IN PERMIT.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONFORM WITH THOSE SET FORTH IN PERMIT APPLICATION.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(e) NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES	<u> </u> YES <u> </u> NO	<u> X </u> N/A
(f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(h) CORRECT NAME AND LOCATION OF RECEIVING WATERS.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
(i) ALL DISCHARGES ARE PERMITTED.	<u> X </u> YES	<u> </u> NO <u> </u> N/A
Comments: At the time of inspection, the permittee was still operating under the old permit and the new permit may be issued later in June 2009.		

	PERMIT NO. <u>DC0000094</u>
SECTION I - OPERATION AND MAINTENANCE	
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A (Further explanation attached <input checked="" type="checkbox"/>) DETAILS: O/W separation, neutralization, settling, filtration (all or some combination @ various outfalls)	
(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS PROVIDED.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(c) REPORTS ON ALTERNATE SOURCE OF POWER SENT TO EPA/STATE AS REQUIRED BY PERMIT.	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(d) SLUDGES AND SOLIDS ADEQUATELY DISPOSED. Once per year by Triambirate, Inc.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(e) ALL TREATMENT UNITS IN SERVICE.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATION AND MAINTENANCE PROBLEMS. Mostly in-house staff	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(g) QUALIFIED OPERATING STAFF PROVIDED.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING NEW OPERATORS. Training manual, on-job training	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJOR EQUIPMENT SPECIFICATIONS, AND PARTS AND EQUIPMENT SUPPLIERS.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINTENANCE OF EACH ITEM OF MAJOR EQUIPMENT.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED. SOPs for preventive maintenance (e.g. O/W separator)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(l) SPCC PLAN AVAILABLE. Integrated Contingency Plan (ICP)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(m) REGULATORY AGENCY NOTIFIED OF BY-PASSING. (Dates _____)	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(n) ANY BY-PASSING SINCE LAST INSPECTION.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A
(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A
SECTION J - COMPLIANCE SCHEDULES	
PERMITTEE IS MEETING COMPLIANCE SCHEDULE. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A (Further explanation attached _____)	
CHECK APPROPRIATE PHASE(S):	
<input type="checkbox"/> (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE AUTHORITIES TO BEGIN CONSTRUCTION. <input type="checkbox"/> (b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants, etc.). <input type="checkbox"/> (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED. <input type="checkbox"/> (d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED. <input type="checkbox"/> (e) CONSTRUCTION HAS COMMENCED. <input type="checkbox"/> (f) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE. <input type="checkbox"/> (g) CONSTRUCTION HAS BEEN COMPLETED. <input type="checkbox"/> (h) START-UP HAS COMMENCED. <input type="checkbox"/> (i) THE PERMITTEE HAS REQUESTED AN EXTENSION OF TIME.	
Comments: 	

		PERMIT NO. <u>DC0000094</u>
SECTION K - SELF-MONITORING PROGRAM		
PART 1 - FLOW MEASUREMENT (Further explanation attached <u> X </u>) PERMITTEE FLOW MEASUREMENT MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS:		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(a) PRIMARY MEASURING DEVICE PROPERLY INSTALLED.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
TYPE OF DEVICE <input type="checkbox"/> WEIR <input type="checkbox"/> PARSHALL FLUME <input type="checkbox"/> MAGMETER <input type="checkbox"/> VENTURI METER <input checked="" type="checkbox"/> OTHER (Specify <u>Totalizer (~water meter) @ 003 and other outfalls have various estimating procedures</u>)		
(b) CALIBRATION FREQUENCY ADEQUATE. (Date of last calibration <u> Meter does not need calibration </u>)		<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A
(c) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(d) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(e) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
PART 2 - SAMPLING (Further explanation attached <u> X </u>) PERMITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS: <u>Pepco and NAES collect all samples and analyze pH and Cl2 on site.</u>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(a) LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(c) PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT. IF NO, <input checked="" type="checkbox"/> GRAB <input type="checkbox"/> MANUAL COMPOSITE <input type="checkbox"/> AUTOMATIC COMPOSITE <input type="checkbox"/> FREQUENCY <u>once per month</u>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(i) SAMPLES REFRIGERATED DURING COMPOSITING		<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(ii) PROPER PRESERVATION TECHNIQUES USED		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT		<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40 CFR 136.3		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(e) MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT.		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A
(f) IF (e) IS YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
PART 3 - LABORATORY (Further explanation attached <u> X </u>) PERMITTEE LABORATORY PROCEDURES MEET THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS: <u>Contract Lab was not visited during subject CEI.</u>		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.3)		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(c) PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED.		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A
(d) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. Onsite labs		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(e) QUALITY CONTROL PROCEDURES USED. By Contract Lab		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(f) DUPLICATE SAMPLES ARE ANALYZED <u>10 (TSS); 5 (O&G)</u> % OF TIME.		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(g) SPIKED SAMPLES ARE USED _____ % OF TIME.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
(h) COMMERCIAL LABORATORY USED. O&G, TSS, Metals		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> N/A
(i) COMMERCIAL LABORATORY STATE CERTIFIED.		<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A
LAB NAME <u>Microbac Laboratories, Inc.</u> (Picks up samples @ Pepco site) LAB ADDRESS <u>Baltimore Division, 2101 Van Daman Street, Baltimore, MD 21224, Tel. 410-633-1800/6553</u>		
Comments: <u>See attached comments.</u>		

[illegible]

**Water Compliance Inspection
Potomac Electric Power Company
Benning Road Generating Station
NPDES No. DC0000094
Inspection Summary**

Introduction

On June 3, 2009, a water compliance inspection was conducted to evaluate the wastewater monitoring practices of Potomac Electric Power Company, Benning Road Generating Station, 3400 Benning Road, NE, Washington, D.C. 20019 (PEPCO). U.S. Environmental Protection Agency (EPA) inspector, Mr. Charles Hufnagel and District Department of the Environment inspector, Dr. Adion Chinkuyu reviewed records, interviewed personnel, conducted an inspection tour of the facility, and completed an EPA Form 3560-3 Water Compliance Inspection Report. The following facility representatives participated in the inspection: (a) PEPCO representatives: Ms. Fariba Mahvi, Mr. Ghirmay Berhe, Mr. Roger Williamson, Mr. Larry Merkel, and Mr. Terry Marrow. (b) North American Energy Services (NAES) representatives: Mr. Mike Barch, Ms. Heather MacDonald, and Mr. Joe Camerini. A sign-in sheet (copy attached) was passed around the conference table, and the names, titles, and phone numbers of all participants were indicated. Inspectors' credentials were presented to facility personnel, upon entry. The weather was partly cloudy and dry with temperature of about 80°F.

Permit Status

PEPCO's NPDES Permit (DC0000094) was issued to the facility on November 17, 2000 and expired on November 16, 2005. The Permit was administratively extended by EPA based on PEPCO's timely re-application dated 5/16/2005. The facility is currently operating under the expired permit parameters and conditions, with the new permit expected to be reissued later in June 2009.

Facility Description

The Benning Service Center (facility), which is referred to in the Permit as "Benning Generating Station" consists of approximately 77 acre site which contribute stormwater and process water to the discharges authorized by the Permit. PEPCO consists of a generating station, a 230 kV switchyard, a 69 kV switchyard, fleet services, office and security services, transmission and distribution shops, transformer repair and testing shop, storage buildings, several parking areas, a hazardous waste/PCB handling storage facility, hazardous waste accumulation trailer, asbestos trailer, subsidiary and contractor facilities, and various outdoor storage areas. The generating station is owned by Potomac Power Resources (PPR) [a wholly owned subsidiary of Pepco Energy Services (PES)] North American Energy Services (NAES) operates and maintains the Benning Road Generating Station for PEPCO.

The generating station is comprised of two oil-fired steam generators each with a rated output of 275 megawatts. There are also two oil-fired package boilers for auxiliary and building services.

*Water Compliance Inspection
Potomac Electric Power Company
Benning Road Generating Station
NPDES No. DC0000094
Inspection Summary*

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The facility uses No. 2 fuel oil to start-up the plant, then, switches to No. 4 fuel oil for sustained operation. The facility stores approximately 4.2 million gallons of fuel on-site and maintains a Spill Prevention, Control, and Countermeasure (SPCC) plan. The facility was not in operation during the time of inspection. The facility primarily generates electricity during the peak winter and summer seasons when electricity demand is high. According to PEPCO staff, the facility operated for 9.5 days in 2008; 2 days to date in 2009 for capacity testing.

A Water Balance Diagram for the generating station's processes is attached for reference.

Treatment

(a) Process Water

The facility has two oil/water separators: (i) oil/water separation/settling system at Outfall 201, which was designed to remove oil and grease from utility wastewater and an oil 2 loading area. Monitoring point 201 is the discharge point from this oil/water separator (photos 1 & 2). (ii) oil/water separation/settling/filtration system at Outfall 003, which is a treatment system designed to remove oil, grease and solids from water that is removed from utility manholes. The treatment system operates in batch mode and consists of an oil/water separator, settling tank (photo 3 & 4) followed by a two staged filter system of cloth and charcoal media (photo 5). If necessary, pH is adjusted before discharging. At the time of the inspection, the treatment system was operating but not discharging to 003.

(b) Stormwater

Stormwater runoff from PEPCO is conveyed through a drain system and is discharged to the Anacostia River and city storm sewers at various outfalls. The majority of the stormwater runoff from the service center is conveyed through a 36-inch to 54-inch storm drainpipe to the Anacostia River via Outfall 013 (photo 6). The facility also has two Stormwater Quality Control Structures for controlling sediments (sand, gravel, etc). The facility has housekeeping procedures and BMPs that were in place to prevent release of pollutants to environment. These include: adequate dikes and secondary containment; spill containment and clean-up; oil absorbent booms/filter cloth at inlets/drains (photo 7).

Stormwater monthly inspections are conducted by NAES staff for the generating station and PEPCO staff for the remainder of the facility site. Both PEPCO and NAES use the same type of report, which is in the form of a checklist. The report is signed by the inspector and reviewed and initialed by a manager(s). The PEPCO and NAES reports currently appear to meet the intent of EPA's Multisector General Stormwater Permit.

Outfalls

Stormwater runoff from PEPCO is conveyed through a drain system and is discharged to the Anacostia River and city storm sewers at various outfalls. The majority of the stormwater runoff

from the service center is conveyed through a 36-inch to 54-inch storm drainpipe to the Anacostia River via Outfall 013 (photo 6).

There is a variety of permitted, process wastewater flows at PEPCO. These are included in the NPDES Permit. The majority of these flows are discharged to the Anacostia River via Outfall 013. The permitted discharges consist of: non-contact cooling water, cooling tower blowdown, oil/water separators, cooling tower basin wash water, stormwater, cooling water from boiler feed pumps, demineralization, regeneration wastes, groundwater infiltration sump water, fireside washing, and miscellaneous cleaning waste, and water for hydrostatic tank testing.

The following outfalls are listed in the Permit, some are internal and some have monitoring requirements with discharge limits.

Outfall	Description	Monitoring	Limits
001	Internal, stormwater		
002	Internal, cooling tower blowdown (closed)		
003 ¹	Internal, oil/water separator	X	X
005	Internal, stormwater		
006	Internal, stormwater		
011	Internal, stormwater		
012	Internal, stormwater		
013 ²	Discharge to Anacostia River	X	X
014	Internal, stormwater		
015	Internal, stormwater		
016	Municipal sewer, stormwater		
201 ³	Internal, wastewater from oil/water separator, reverse osmosis regenerate, boiler blowdown	X	X
202 ⁴	Internal, cooling tower blow down	X	X
203 ⁴	Internal, cooling tower blow down	X	X
401	Municipal sewer, stormwater runoff from transformer storage area.	X	X
402	Internal, stormwater runoff from transformer shop area	X	X
416	Municipal sewer, stormwater runoff from transformer storage area.		

Notes:

1. Monitoring point 003 is the discharge point from a treatment system designed to remove oil, grease and solids from water removed from utility manholes and transported to the facility. The treatment system operates in batch mode and consists of an oil/water

- separator, settling tank (photos 3 & 4) followed by a two staged filter system of cloth and charcoal media (photo 5).
2. Monitoring point 013 has two sets of monitoring requirements and effluent limits. These requirements vary depending on whether there is a discharge of cooling tower blow down.
 3. Monitoring point 201 is the discharge point from an oil/water separator designed to remove oil, grease from utility wastewater.
 4. Monitoring points 202 and 203 have two sets of monitoring requirements and effluent limits. These requirements vary depending on whether there is a discharge of cooling tower blow down or cooling tower wash water. There was no discharge during the inspection.

NAES staff samples and conducts self-monitoring activities at Outfalls 201, 202, 203, and 013 while PEPCO samples Outfall 003. Effluent samples for Outfall 013 are collected at a manhole prior to the end of discharge pipe. Samples for Outfalls 003 and 201 are collected at the end of the treatment system discharge pipe. Samples for Outfalls 202 and 203 are collected from the cooling tower sumps.

Findings

(a) Permit

PEPCO's NPDES Permit (DC0000094) was issued to the facility on November 17, 2000 and expired on November 16, 2005. The permit was administratively extended because the facility has submitted its permit renewal application. The facility is awaiting its new permit. The facility is currently operating under their expired permit parameters and conditions.

(b) Laboratory Inspection (NAES)

The facility's in-house laboratory is used to monitor effluent samples for residual chlorine and pH. The facility's other effluent samples are shipped off-site to Microbac Laboratories, Inc. in Baltimore (formerly known as Gascoyne Laboratories, Inc.) for analysis. The facility's in-house lab utilizes a GE Infrastructure Water and Process Technologies pH Meter. A review of the facility's calibration log books indicated the facility has been calibrating the instrument every month using a 3 point calibration before use, and the pH buffers were not expired. PEPCO's and Microbac's labs were not inspected.

(c) NPDES Permit Outfall Inspection

Outfall 201: The inspectors observed the general oil/water separator and Outfall 201, which is a monitoring point for the facility's industrial wastewater before it commingles with stormwater and their other process wastewater flows that would discharge to the site's previously noted main storm drain (36" to 54" pipeline). Monitoring point 201 is an internal monitoring point/outfall that discharges intermittent (pump) flow to a manhole on a 48" section of this main pipeline. After the wastewater streams commingle, the effluent flows through a 54" section of the main

pipeline that discharges as Outfall 013. During the time of inspection, the flow had some turbidity. The inspectors also observed that the flows from Outfall 201 are estimated from pump rates and timers (hour meters).

Outfall 013: Outfall 013 is the facility's largest outfall, a 54" pipe that discharges a combined waste stream of process wastewater and stormwater. More specifically, Outfall 013 discharges wastewater from 2 oil/water separators, non-contact cooling water, cooling tower blowdown, basin cleaning wastes from two cooling towers, and stormwater from several locations within the facility. The flow from Outfall 013 is estimated from the summation of the process outfalls and stormwater runoff calculated using rainfall data and runoff coefficients for the various sections of the facility. This approach appears to be consistent with Part A of the permit. The outfall discharges into wetlands, a few hundred feet from the Anacostia River. On the date of the inspection, there was no non-contact cooling water exiting the outfall. However, the only flow in Outfall 013 was from the oil/water separator(s) and possibly groundwater seepage. Although slight turbulence indicated flow at the partially submerged outfall pipe, no plume could otherwise be distinguished as the outfall pipe discharged into a pool of muddy water.

Outfalls 202 and 203: Outfalls 202 and 203 are for blow down discharges from cooling towers/units 15 and 16, respectively. These outfalls discharge into Outfall 201. The flows from 202 and 203 are estimated from valve characteristics according to facility representatives. Outfalls 202 and 203 discharges only when the facility is discarding the cooling water because of high conductivity. Each tower has a pump house for cooling (river) water where pH adjustment can also be made, if necessary. Samples for Outfalls 202 and 203 are collected from the cooling tower sumps. There was no discharge during the time of inspection.

Outfall 003: Outfall 003 is an internal outfall that discharges batch (pumped) flow from the oil/water separator to the manhole of the 48" section of the main pipeline, which ultimately becomes the 54" main pipeline to Outfall 013. The flow discharged through Outfall 003 is measured by a flow meter on the discharge line (photo 8). The outfall was not discharging at the time of inspection.

Outfall 010: Outfall 010 is an internal outfall for the drying pit where spray cleaning water from manholes is collected. PEPCO reportedly has (b)locked its discharge (stopped discharging) for the past few years and indicated that it will be removed from the permit (photo 9).

Outfall 401: Outfall 401 is a stormwater manhole where monitoring is performed. The manhole was not opened to observe if runoff or groundwater infiltration was present. PEPCO reported that the outfall will be removed from the permit.

Outfalls 402 and 416: These are internal stormwater inlets receiving no flow at the time of inspection. The outfalls had oil booms and filter cloth inside and appeared to be in good

condition on the date of the inspection. PEPCO reported that the outfalls will be removed from the permit.

(d) Self Monitoring Program

OK During the 2008 inspection, it was observed that the facility was not using approved protocols to collect samples for oil and grease. The facility representative had indicated that a bucket was used to collect the sample and then the sample is poured into glass bottles for shipment to the laboratory for analysis. During the 2009 inspection samples for oil and grease are now collected directly in glass containers using plastic and stainless steel sample poles with container holders (photo 10).

(e) Record Review

OK Discharge Monitoring Reports (DMR) and the facility's Stormwater Pollution Prevention Plan were reviewed as part of the inspection. DMRs from January to April 2009 were reviewed along with all the supporting lab analysis and flow data used to generate the reports. The DMR and supporting data appeared to be adequate. Spot check for completeness and accuracy identified no discrepancies.

OK Permit Part C of the permit, Storm Water Management requires the facility to develop and implement a SWPPP. The facility's SWPPP is combined with the Spill Prevention, Control, and Countermeasure (SPCC) plan into a document called Integrated Contingency Plan (ICP). The ICP was reviewed as part of this inspection. The ICP is updated annually, and the most recent ICP revision was dated 1/15/2009. The ICP was signed by the responsible corporate officials. The inspectors observed that the drainage area for outfall 013 was indicated as 141.75 acres yet the total facility area is 77 acres. PEPCO staff stated that after they have revised the SWPPP, they will mail a revised copy to the inspectors. On June 15, 2009, the facility submitted a revised SWPPP to DDOE.

(f) Stormwater

OK The monthly inspections are conducted by NAES staff for the generating station and PEPCO staff for the remainder of the facility site. Each complete separate reports. As prompted by the 2008 inspection, NAES has revised the format of its report so that it matches the PEPCO format, whereby the report is in the form of a checklist and is signed by the inspector and reviewed and initialed by a manager(s). The PEPCO and NAES reports currently appear to meet the intent of EPA's Multisector General Stormwater Permit.

(g) Recent Improvements

OK A new oil skimmer is installed at Outfall 201. An additional treatment/storage tank was installed at Outfall 003 (oil/water separator).

(h) Corrections to the 2008 CEI Findings

- (i) Samples for oil and grease are now collected directly in glass containers with implementation of plastic and stainless steel sample poles with container holders (photo 9).
- (ii) pH and chlorine residual samples are collected and analyzed within 15 minutes as now documented in lab's log books.
- (iii) Sample temperatures are now documented on chain of custody forms.
- (iv) NAES's monthly stormwater inspection records are now essentially the same as PEPCO's

Reference EPA Form 3560-3, Water Compliance Inspection Report which is attached as part of the subject CEI report.

Attachment(s):

- 1. Narrative Inspection Report (this document)
- 2. Water Compliance Evaluation Inspection Report (EPA Form 3560-3)
- 3. Sign-in Sheet
- 4. Water Balance Diagram (generating station)
- 5. Photo Log

NPDES Compliance Evaluation Inspection NPDES No. DC0000094
Potomac Electric Power Co (PEPCO) - Benning Generating Station,
3400 Benning Road, NE, Washington, DC 20019

Inspected by: Adion Chinkuyu, DDOE and Charles Hufnagel, EPA
Inspection Date: June 3, 2009



Photo 1: New skimmer for the oil/water separator at Outfall 201.

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Potomac Electric Power Company
Benning Road Generating Station
NPDES No. DC0000094*

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Inspection Photo Log

June 3, 2009



Photo 2: Oil after being separated from water at the oil/water separator at Outfall 201.



Photo 3: Tank A at the oil/water separator at Outfall 003.



Photo 4: Skimmer and settling tanks at the oil/water separator at Outfall 003.



Photo 5: Carbon and cloth filters at the oil/water separator at Outfall 003.



Photo 6: Main Outfall 013 at the Anacostia River wetlands. The outfall is partially submerged in a pool of muddy water, hence no plume could be distinguished due to the muddy pool water. Only slight turbulence at the pool's surface, otherwise, indicated a discharge flow at this time.



Photo 7: Oil boom/filter cloth inside an inlet at Outfall 416. (Typical @ several inlets.)



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N: 4307215.7

Photo 8: Flow meter at the oil/water separator at Outfall 003.

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Photo 9. Drying pit where spray cleaning water from manholes is collected. PEPCO reportedly has (b)locked its discharge (stopped discharging) for the past few years.



Photo 10. Plastic and stainless steel equipment used to hold bottles for oil and grease samples. The equipment was designed as a corrective action based on 2008 inspection findings.

Water Compliance Inspection
Potomac Electric Power Company
Benning Road Generating Station
NPDES No. DC0000094

NPDES Compliance Inspection
6/3/2009

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BENNING GENERATING STATION COOLING WATER FLOW DISTRIBUTION / WATER BALANCE DIAGRAM

